KEADBY
NEXT GENERATION
POWER STATION
Hydrogen-enabled flexible power

A collaboration between SSE Thermal and Equinor

The Keadby Next Generation Power Station Project

Document Ref: 9.3

Planning Inspectorate Ref: EN0110001

The Keadby Next Generation Power Station Development Consent Order 202[x]

Land at, and in the vicinity of, the existing Keadby Power Station (Trentside, Keadby, Scunthorpe DN17 3EF)

Statement of Common Ground with Natural England

The Planning Act 2008

Applicant: Keadby Next Generation Limited

Date: June 2026

Glossary

Abbreviation	Description
AOD	Above Ordnance Datum - a spot height (an exact point on a map) with an elevation recorded beside it that represents its height above a given datum
BAT	Best Available Techniques - the available techniques which are the best for preventing or minimising emissions and impacts on the environment. BAT is required for operations involving the installation of a facility that carries out industrial processes. Techniques can include both the technology used and the way an installation is designed, built, maintained, operated and decommissioned.
CCGT	Combined Cycle Gas Turbine - a highly efficient form of electricity generation technology. An assembly of heat engines work in tandem using the same source of heat to convert it into mechanical energy which drives electrical generators and consequently generates electricity.
CRT	Canal and River Trust – organization responsible for canals, rivers, docks and reservoirs in England and Wales
DCO	Development Consent Order - made by the relevant Secretary of State pursuant to The Planning Act 2008 to authorise a Nationally Significant Infrastructure Project. A DCO can incorporate or remove the need for a range of consents which would otherwise be required for a development. A DCO can also include rights of compulsory acquisition.
DEMP	Decommissioning Environmental Management Plan - a plan to outline how a decommissioning project will avoid, minimise or mitigate effects on the environment and surrounding area.
EA	Environment Agency - a non-departmental public body sponsored by the United Kingdom government's Department for Environment, Food and Rural Affairs (DEFRA), with responsibilities relating to the protection and enhancement of the environment in England.
EcIA	Ecological Impact Assessment - a process by which the potential ecological impacts of a development proposal are assessed.

Abbreviation	Description
ES	Environmental Statement - a report in which the process and results of an Environment Impact Assessment are documented.
HRA	Habitats Regulations Assessment
NE	Natural England – Advisor to the Government for the natural environment in England. Aim to help protect and restore the natural world.
SAC	Special Area of Conservation - high quality conservation sites that are protected under the European Union Habitats Directive, due to their contribution to conserving those habitat types that are considered to be most in need of conservation.
SoS	Secretary of State - the decision maker for DCO applications and head of Government department.
SPA	Special Protection Area - strictly protected sites classified in accordance with article 4 of the EC birds directive. Special Protection Areas are Natura sites which are internationally important sites for the protection of threatened habitats and species.
SSSI	Site of Special Scientific Interest - nationally designated Sites of Special Scientific Interest, an area designated for protection under the Wildlife and Countryside Act 1981 (as amended), due to its value as a wildlife and/or geological site.

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1. Introduction

1.1.1. This Statement of Common Ground has been prepared on behalf of Keadby Next Generation Limited ('the Applicant') and Natural England (NE). It supports the application for a Development Consent Order (DCO) ('the Application'), that has been submitted to the Secretary of State (the 'SoS') for Energy Security and Net Zero under Section 37 of 'The Planning Act 2008' ('the 2008 Act').

1.1.2. The Applicant is seeking development consent for the construction, operation and maintenance of a new combined cycle gas turbine ('CCGT') electricity generating station on land at, and in the vicinity of, the existing Keadby Power Station, Trentside, Keadby, Scunthorpe DN17 3EF ('the Site').

1.1.3. The Keadby Next Generation Power Station ('the Proposed Development') is a new CCGT electricity generating station with a capacity of up to 910MW electrical output. The CCGT electricity generating station will be designed to run on 100% hydrogen and able to run on 100% natural gas or a blend of natural gas and hydrogen and will be located on land to the west of Keadby 1 and Keadby 2 Power Stations. The Proposed Development includes connections for cooling water, electricity, hydrogen and natural gas, and construction laydown areas and other associated development. It is described in full in Environmental Statement (ES) Volume I Chapter 4: The Proposed Development (Application Document Ref. 6.2.4).

2. Matters Agreed

2.1.1. Within Table 2.1 below, the date and location where matters have been agreed have been included. The corresponding meeting minutes, emails and letters referenced here are also provided in Appendix 1.

Table 2.1 List of Matters Agreed

Matter agreed	Date and place agreed	Commentary
Chapter 11: Biodiversity & Nature Conservation		
Ecological Impact Assessment Methodology and Conclusions	Written Representations submitted by NE – 18 March 2026 [REP3-033]	It is agreed that the scope, methodology and assessment findings presented in Environmental Statement (ES) Volume I Chapter 11: Biodiversity and Nature Conservation (Application Document Ref. 6.2.11) are acceptable.
Protected Species	Written Representations submitted by NE – 18 March 2026	It is agreed that ES Chapter 11: Biodiversity and Nature Conservation (Application Document Ref. 6.2.11) has adequately addressed the points raised by Natural England's statutory consultation response on 20 February 2025 in relation to assessment method, impact assessment and proposed mitigation approach for the following protected species: • Water vole • Otter • Badger Natural England accepts the approach to undertaking additional surveys for otter, water vole, bats and badger prior to works commencing which is secured by Requirement 16, Schedule 2 of the Draft DCO (Application Document Ref. 3.1). and any licences.
Chapter 8: Air Quality		
Air Quality Assessment	Written Representations	It is agreed that the submitted ES Chapter 8: Air Quality (Application Document Ref 6.2.8), Appendix 8A: Air Quality – Construction

Matter agreed	Date and place agreed	Commentary
	from NE – 18 March 2026	Assessment and Appendix 8B: Air Quality – Operational Assessment (Application Document Ref. 6.3.4 and 6.3.5 respectively) sufficiently address Natural England's Statutory Consultation comments received on 20 February 2025 in relation to: • Consideration of in-combination effects within Appendix 8B: Air Quality – Operational Assessment (Application Document Ref. 6.3.5); • Further details to show that saltmarsh vegetation at the Humber Estuary would not be impacted; • Provision of isopleths for nitrogen deposition as well as nitrogen dioxide and nitrous oxides within Figure 8.10 (Application Document Ref 6.4.16); • Further justification provided on the methodology adopted for inclusion of Keadby 2 within the baseline rather than as an in-combination project; and • Updated approach to the screening for adverse effects as part of the HRA in relation to the critical level/load and process contribution.
Habitats Regulations Assessment		
HRA Report Conclusion	Written Representations from NE – 18 March 2026	It is agreed that the scope, methodology and assessment findings reported in the Habitats Regulations Assessment Appropriate Assessment Report (hereafter referred to as HRA) (Application Document Ref. 5.2) are acceptable and the Proposed Development will not adversely affect the integrity of the Humber Estuary SAC/ SPA/ Ramsar site or the Thorne and Hatfield Moors SAC and SPA. In particular, the following points raised by Natural England at

Matter agreed	Date and place agreed	Commentary
		the pre-application stage have been adequately addressed: • Clarification on the existing Keadby developments which have been included in the baseline for the assessment. • Consideration of the potential future decommissioning of Keadby 1 Power Station as part of the assessment. • Clarification regarding the air quality effects in relation to the Thorne and Hatfield Moors SAC/ SPA. Where Natural England has raised comments in relation to specific parts of the HRA, these comments have been specified in the sections below for completeness.
Air Quality Assessment in HRA – General Approach	Written Representations from NE – 18 March 2026	It is agreed that the correct approach has been taken in relation to assessment of air quality effects in the HRA (Application Document Ref. 5.2), including: • the consideration of atmospheric pollution as a threat to the Humber Estuary and Thorne and Hatfield Moors SAC/ SPA sites; and • the conclusion of no likely significant effects as a result of construction dust from the Main Site.
Air Quality Assessment in HRA – Construction Pollutants	Written Representations from NE – 18 March 2026	It is agreed that the updates made to the HRA prior to DCO Application submission have sufficiently addressed the points requested by Natural England on 29 July 2025 in relation to: • The screening out of emissions from non-road mobile machinery and plant. • Acknowledgement of ammonia as a pollutant in its own right and a component of nitrogen deposition in relation to construction traffic and consideration of potential effects in relation to critical levels at protected sites.

Matter agreed	Date and place agreed	Commentary
		• Consideration of acid deposition impacts on qualifying features as a result of construction traffic. • Further detail explaining the approach taken to screening out of sulphur dioxide emissions during the construction phase. • Further clarification regarding the consideration of *Salicornia* (Humber Estuary SAC qualifying feature H1310) as the most relevant feature for the critical loads adopted in the construction traffic assessment. • Details relating to the process contributions of pollutants at the locations in the Humber Estuary SAC/ SPA/ Ramsar site. • Further justification regarding the conclusion of no adverse effects on integrity in relation to nitrogen deposition and nitrous oxides at the Humber Estuary SAC/ SPA Ramsar site during construction.
Air Quality Assessment in HRA – Operational Activities	Written Representations from NE – 18 March 2026	It is agreed that the exclusion of sulphur dioxide and particulates as operational phase pollutants is reasonable as emissions will be minimal. It is also agreed that the consideration of nitrous oxides, ammonia, nitrogen and acid deposition in natural gas and hydrogen firing operational scenarios is sufficient. The justification for excluding assessment of operational traffic is considered acceptable by Natural England. It is agreed that the updates made to the HRA prior to DCO Application submission have sufficiently addressed the points requested by Natural England on 29 July 2025 in relation to: • Consideration of effects from nitrous oxides in the appropriate assessment and further explanation as to why no adverse effect on

Matter agreed	Date and place agreed	Commentary
		integrity is anticipated from nitrogen deposition. • Further clarification on anticipated ammonia and acid deposition concentrations at the Humber Estuary SAC/ SPA/ Ramsar site and the conclusion of no likely significant effects. • Further clarification in relation to nitrogen deposition concentrations at the Humber Estuary SAC/ SPA/ Ramsar site and the conclusion of no likely significant effects. • Further clarification on use of the saltmarsh critical load in the assessment of air quality impacts to other qualifying habitats at the Humber Estuary.
Air Quality Assessment in HRA – Thorne and Hatfield Moors	Written Representations from NE – 18 March 2026	It is agreed that the updates made to the HRA prior to DCO Application submission provide further clarification on the modelling approach adopted and the conclusion of no likely significant effects from nitrous oxides, ammonia, nitrogen deposition and acid deposition at the Thorne and Hatfield Moors SAC/ SPA is acceptable.
Water Quality Assessment in HRA	Written Representations from NE – 18 March 2026	It is agreed that the correct approach has been taken in relation to assessment of water quality effects in the HRA, and the updates made to the HRA post DCO Application submission have sufficiently addressed the points requested by Natural England on 29 July 2025 in relation to: • Anticipated temperature and volume inputs of treated effluent and proposed treatment and monitoring approaches; • Information on pollutant levels in effluent discharge; • Method of screening out adverse effects on integrity of designated sites; • Description of Best-Available Techniques (BAT) in relation to management of the

Matter agreed	Date and place agreed	Commentary
		quality of water discharged from the Proposed Development acknowledging that the exact techniques will be subject to detailed design which will be shared and approved in accordance with Requirement 5 of the Draft DCO (Application Document Ref. 3.1). • The proposed surface water drainage approach for the site including mitigation methods (on the basis that details relating to the surface water drainage system will be shared and approved in advance of construction in accordance with Requirement 11 of the Draft DCO (Application Document Ref. 3.1)) • Risks relating to the degradation of below ground structures left in-situ following decommissioning (on the basis that a Decommissioning Environmental Management Plan (DEMP) will be submitted and approved in advance of works in accordance with Requirement 36 of the Draft DCO (Application Document Ref. 3.1)).
Assessment of Noise and Visual Disturbance to Birds on Adjacent Fields in HRA	Email correspondence – 24 October 2024 Email correspondence – 23 April 2026	It is agreed there is no requirement for additional bird surveys of the arable fields adjacent to the Site. It is agreed that an appropriate approach has been taken in relation to assessment of noise and visual disturbance effects to birds on adjacent arable fields in the updated HRA, and the updates and further information supplied, have sufficiently addressed the points requested by Natural England on 29 July 2025 in relation to: • Inclusion of further desk study information relating to the presence of birds on adjacent arable habitat.

Matter agreed	Date and place agreed	Commentary
		• Inclusion of LAeq modelling and contour maps. • Further clarification on the impacts to bird foraging resource and the rationale for screening out of this pathway.
Atmospheric pollution in operation	Natural England's response to RIES Q1 The Applicant's response to RIES Q2.	It is agreed that the change made to Requirement 5(1)(c) of the draft DCO (Document Ref. 3.1) at Deadline 5 to alter the wording from "no worse than" to "not materially new or materially different" is appropriate and has sufficiently secured the need for further assessment work should there be a material difference to the stack height during detailed design.
Water pollution in operation – SuDS design	Natural England's responses to RIES Q5	It is agreed that the update made to the HRA Report in Paragraph 7.5.4 [REP1-007] to provide further details on the design (including attenuation ponds, oil water separators, retention ponds) has provided sufficient information to inform the HRA for the surface water discharge permit application and to demonstrate there would be no AEOI.

3. Matters Not Yet Agreed

3.1.1. The Applicant and Natural England confirm that there are no outstanding matters to be agreed.

4. Signatures

This SoCG is agreed

On behalf of Natural England:

Name: [redacted]

Signature:

[redacted]

Date: 11.06.2026

On behalf of the Applicant:

Name: [redacted]

Signature:

[redacted]

Date:

Appendix 1 - Correspondence

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By email
16 January 2025

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Natural England
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Our ref 299029-00

Keadby Next Generation Power Station

Response Regarding Outstanding Air Quality Issues

Dear [redacted],

Following the consultation meeting held with Natural England on the 26 November 2024, the Keadby Next Generation Power Station Project team shared the draft Preliminary Environmental Information Report (PEI Report) technical chapters and associated appendices for review and comment. There were some comments received from Natural England on the 13 December 2024 relating to outstanding queries on air quality.

We have reviewed the comments which were received and have set out our responses in the following sections.

Site selection and designated features.

Natural England requires all designated sites within the potential zone of influence to be identified and assessed, including their features of interest (such as species, habitats etc).

Relevant SACs, SPAs, Ramsar sites, SSSIs, and Local Nature Sites within a 15 km buffer for designated sites and 2 km for Local Wildlife Sites are identified; and designated features such as nitrogen-sensitive habitats and species are highlighted.

Supporting habitats for fauna (e.g., bird foraging grounds) require further assessment, as do indirect effects on the ecological network (e.g., via food chains) which appear underexplored.

As per accepted practice, given the zone of influence needing to be considered in an Air Quality Impact Assessment (AQIA), the primary data gathering is completed as a desk based exercise. A 15km distance is being used for designated sites and a 2km distance for other designations such as Local Wildlife Sites, in line with Environment Agency guidance on assessing air quality impacts from large power stations. Designations are identified and then the information published by Natural England and APIS are utilised to define and assess the relevant habitats and species.

Designations aside, the surrounding landscape is prevailingly (as visible in Google Earth) intensively managed arable farmland i.e. a habitat type that is not sensitive to nitrogen deposition.

Even if this undesignated farmland habitat is functionally important for certain qualifying species (such as birds), its suitability would not be compromised by nitrogen deposition from the Proposed Development. Within arable farmland the prevailing nitrogen source will always be the artificial fertilisers applied by the relevant landowners for purposes of the primary land-use i.e. crop production.

Where potentially significant air quality impacts are identified within PEI Report Appendices 8A and 8B these have been proportionality assessed within the relevant ecology deliverables i.e. PEI Report Chapter 11 and the draft HRA Screening Report.

Baseline data and critical loads

The assessments reference APIS-derived critical loads and deposition thresholds for nitrogen and sulphur and background concentrations for NOx and ammonia at ecological receptors are included.

However, it is unclear in the documents whether lower-end critical loads were applied, as recommended for sensitive habitats. While this may have been covered in verbal discussions, if this could be made explicit in the documentation it would certainly strengthen the case. Also, ongoing surveys for sensitive species or updated background concentrations near key receptors are not discussed in detail.

The lower end of the critical load range is applied in the assessment as stated in the headings of PEI Report Appendix 8B Table 15 and Table 16. In addition, the background concentrations used for the assessment have been taken from the APIS website for the most recent period of data available.

Ecological surveys and scoping have been completed at the site and surrounding land, as set out in PEI Report Chapter 11 and Appendix 11C. Beyond the land in the Applicant's control, the predominant land use is agricultural, so the predominant habitats are arable fields, and to a lesser extent species poor pasture. These are not sensitive habitats, and any species using these habitats would also not be typically considered sensitive or require survey. Even if this undesignated farmland habitat is functionally important for certain qualifying species (such as birds), its suitability would not be compromised by nitrogen deposition from the Proposed Development. Within arable farmland the prevailing nitrogen source will always be the artificial fertilisers applied by the relevant landowners for purposes of the primary land-use i.e. crop production.

Therefore. surveys in the wider landscape are not considered to be required, and this position is consistent with Planning Practice Guidance which states that "*planning authorities should require ecological surveys only where clearly justified. Assessments should be proportionate to the nature and scale of development proposed and the likely impact on biodiversity.*"

Emission source identification

As discussed in the meeting between Keadby and Natural England (26/11/2024), all pollutant sources and substances must be identified, including major, minor, and secondary pollutants.

Emissions inventories include key pollutants (NOx, ammonia, particulate matter), but it looks like minor and secondary pollutants (e.g., VOCs or heavy metals) are not comprehensively addressed.

We would expect to see blended fuel scenarios (e.g., partial hydrogen and natural gas) presented with greater clarity in emissions estimates.

All emissions of potential significance are identified and assessed accordingly. VOC or heavy metals do not require assessment as there are not expected to be any sources of these emissions associated with this Proposed Development.

As stated in PEI Report Chapter 8 Air Quality and Appendix 8B, a fuel blending scenario has not been specifically assessed as the impacts would be within the range that has assessed for 100% natural gas and 100% hydrogen. The assessment therefore covers the worst-case scenario.

Pollution impact pathways

Deposition and air concentration impacts on nitrogen-sensitive habitats are modelled. Dispersion modelling uses a ADMS and incorporates five years of meteorological data.

However, pollution footprint maps still appear missing, limiting the ability to visualise the spatial extent of deposition. These would really help to visualise the case and are easily created with ADMS. Also, indirect effects on fauna reliant on these habitats, such as invertebrates or bird prey species, do not appear to be fully addressed.

Isopleth figures have been produced for the PEI Report (Figures 8.6 – 8.9) – apologies that these were not shared with Natural England previously, but these are available as part of the published PEI Report.

Cumulative and in-combination effects

Cumulative and in-combination effects from all relevant projects within the zone of influence, including specific sector contributions, need to be assessed.

Emissions from Keadby 2 Power Station and other regional projects are incorporated into a cumulative baseline.

No sector-specific breakdown of cumulative impacts appears to be provided (e.g., industry, transport, agriculture), limiting the ability to assess individual sector contributions to exceedances. This may have been addressed in the meeting between Keadby and Natural England (26/11/2024) but will need written clarification.

PEI Report Chapter 21 sets out the long list and short list of other proposed developments that have been scoped into the cumulative impact assessment. At the PEI Report stage, a high-level review has been undertaken; further assessment of cumulative effects will be carried out in the final ES, which will be proportionate to the level of impacts.

It is not standard practice to report cumulative impacts on a sector basis and it is not proposed to be undertaken here. Existing emissions sources are captured through the baseline data and relevant proposed new sources will be appraised through the cumulative impact assessment, irrespective of sector.

Mitigation measures

As discussed, mitigation needs to be clearly defined, with supporting evidence of its effectiveness.

Proposed measures include stack height adjustments, emission controls, and selective catalytic reduction systems. It appears cited evidence from comparable projects to demonstrate the effectiveness of these measures is not included. Adaptive management plans for threshold exceedances are not very well defined.

The proposed measures to control air emissions are embedded into the design of the Proposed Development as set out in PEI Report Chapter 8 Section 8.5, comprising a minimum stack height and emissions control including SCR. Such measures are necessary to ensure that the required emission limits are met for NOx and that effective dispersion is achieved of the emissions for human health impacts.

As set out in PEI Report Appendix 8B, modelling has been undertaken for a range of stack heights (between 70 and 100m above ground level) and using IED emission limits, BAT-AELs and GET data provided by technology providers (OEMs).

The proposed stack height has been identified to ensure adequate dispersion of flue gases and is anticipated to be secured in the DCO. Emissions to air from the Proposed Development will be regulated by the Environment Agency through the granting of an Environmental Permit which will outline permitted emission points and emission limit values (ELVs) for species emitted to air. These ELVs will be set by the Environment Agency to align with relevant European Directives, Best Available Techniques Reference Documents and Guidance for Emerging Techniques.

The design measures will enable the required emission limits to be met, with guaranteed performance levels required from equipment manufacturers to ensure compliance is achieved during operation.

Monitoring and adaptive management

Monitoring plans for air quality parameters are referenced but lack detail on ecological monitoring for sensitive habitats. Adaptive management plans are not described comprehensively.

These are the aspects Natural England would like to see included to make the project better align with Natural England's expectations and may enhance its robustness and likelihood of approval. It is important to remove any ambiguity/doubt as Natural England must operate within the precautionary principle where things are not explicit. This will help to avoid issues during the statutory process.

With the design of the Proposed Development and regulation of its operation through an environmental permit ensuring emission limits will be met and given the large number of other influences on off-site habitats assessed by the air quality assessment, no requirement for off-site habitat monitoring by the Applicant has been identified to date.

PEI Report Chapter 11 and Appendix 11C, as well as the draft HRA Screening Report, provide a detailed review of the relevant designations and their associated sensitive habitats and species. The relevant sensitive habitats (i.e. excluding the unvegetated mudflat and aquatic habitats of the tidal

River Trent) are primarily those located at distance and in many cases, these are already subject to high background nitrogen deposition (as recorded within draft Appendix 8B of the PEI Report). A significant contributor to this background has been the Scunthorpe steel works, and agriculture will also be a predominant nitrogen source. It would not be feasible to separate the limited emissions contribution from the Proposed Development from other more dominant, nitrogen sources. In this context, it is not clear what the purpose of any ambient air quality monitoring would be or how any data gathered could reasonably be utilised to attribute (or discount) impacts and effects to the Proposed Development. Therefore, given the current findings of the AQIA and the intentions of the design process for the Proposed Development, monitoring of off-site habitats by the Applicant is not considered to be necessary.

The Applicant has some sensitive habitats within its landholding (the acid grassland of the former Keadby Ash Tip). If the impact assessment concluded likely significant effects on this habitat from nitrogen deposition, then suitable management options to address this would be considered, as would monitoring. However, based on the current assessment, no adverse effects are predicted.

The above habitats aside, the surrounding landscape is prevailingly (as visible in Google Earth) intensively managed arable farmland i.e. a habitat type that is not sensitive to nitrogen deposition. With arable farmland the prevailing nitrogen source will always be the artificial fertilisers applied by the relevant landowners. Even if this undesignated farmland habitat is functionally important for certain qualifying species, its suitability would not be compromised by the levels of nitrogen deposition attributable to the proposed development.

Since the draft PEI Report documents were shared with Natural England in November 2024, the PEI Report has now been finalised and consultation was launched on 9th January. The final documents are available on the project website which can be found here: https://keadbynextgen.com/

We look forward to receiving any other feedback that Natural England may wish to provide through formal consultation on the PEI Report.

Yours sincerely

[redacted]

[redacted]
Associate Director - Environment

e [redacted]@arup.com

Date: 20 February 2025
Our ref: 476976
Your ref: Keadby Next Generation Power Station

[redacted]
Partner – Head of Planning - DWD
keadbydevelopments@aecom.com

BY EMAIL ONLY

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T 0300 060 3900

Dear [redacted],

Keadby Next Generation Power Station

Land at, and in the vicinity of, the existing Keadby Power Station, Trentside, Keadby, Scunthorpe, DN17 3EF

Consultation in accordance with Section 42 "Duty to Consult" of the Planning Act 2008 & Regulation 13 "Pre-Application Publicity Under Section 48 (Duty to Publicise) of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017

Thank you for your consultation on the above dated 9th January 2025

Natural England is a non-departmental public body. Our statutory purpose is to ensure that the natural environment is conserved, enhanced, and managed for the benefit of present and future generations, thereby contributing to sustainable development.

In responding to your consultation, we have reviewed only those chapters that we consider to be most relevant to our statutory purpose. Therefore, our response in Appendix 1 is based on the following chapters of the Preliminary Environmental Impact Report (PEIR):

- **Chapter 8 – Air Quality**
- **Chapter 11 – Biodiversity**
- **Appendix 8A – Air Quality Construction**
- **Appendix 8B – Air Quality Operation**
- **Appendix 11E – Riparian Mammal Survey Report**
- **Appendix 11D – Confidential Badger Report**

Please note, our comments on impacts to European Sites Humber Estuary SPA, SAC and Ramsar are limited to air quality as we have identified a change from the previously consented Keadby 3 Carbon Capture Power Station NSIP (EN010114) scheme on this site, and so have updated our advice. However additional impacts, which were addressed in the HRA for the previously consented scheme, should also be brought forward into the HRA for this project where the impact pathway still applies. This should include the securing of appropriate mitigation as required.

For any further advice on this consultation please contact the case officer [redacted] [redacted] [redacted]@naturalengland.org.uk) and copy to consultations@naturalengland.org.uk.

Yours sincerely

Lisa Sheldon
Yorkshire & North Lincolnshire Area Team

Appendix 1: Natural England Comments in response to the Preliminary Environmental Impact Report (Keadby Next Generation Power Station)

Air Quality

Following review of Chapter 8 Air Quality, Appendix 8A Air Quality Construction and Appendix 8B Air Quality Operation, Natural England is pleased to provide the following comments for your consideration:

- We note reference to an HRA screening document, however this does not appear to be included in the document library or within the materials we have received.

Screening Out Sites with PC <1% of Critical Level:

- Several protected sites have a Process Contribution (PC) of less than 1% of the critical level. We note that these sites appear to have been discounted from further assessment without the consideration in-combination impacts. We would welcome clarification regarding these omissions, as in-combination effects could still be significant.

Methodological Approach to Screening for Adverse Effects:

- The methodology suggests that if a site is below 70% of its critical level/load, then there is no significant effect even if the Process Contribution (PC) is greater than 1%.
- This is not aligned with Natural England's usual approach, where anything over 1% PC,alone or in combination, should be screened into an Appropriate Assessment (AA). While procedurally important, this distinction is unlikely to materially change the outcome - particularly for NOx, where the Predicted Environmental Concentration (PEC) is only about 30% of the critical level, but the PC exceeds 1%, indicating a Likely Significant Effect (LSE).

Clarification on Approach to the Humber Estuary:

- It is stated that the most affected area within the Humber Estuary is unvegetated, meaning the most sensitive saltmarsh vegetation would not be impacted.
- We recommend that clear evidence is provided to support this conclusion - for example, mapping the location of saltmarsh and unvegetated areas alongside the isopleths. Currently, isopleths appear to be provided for NO_2 and NOx but not for nitrogen deposition (Ndep), which is relevant for assessing impacts on vegetation.

Treatment of Keadby 2 Emissions in the Baseline:

- We note that Keadby 2 emissions have been incorporated into the baseline to create a "modified baseline", rather than assessing Keadby 2 as an in-combination project.
- While this approach is not necessarily incorrect, it is different from the more typical method, which would consider both projects together in an in-combination assessment - particularly as Keadby 2 became operational after the most recent APIS baseline.
- There is a concern that treating Keadby 2 as part of the baseline could downplay the need for mitigation by assuming its contribution is already accounted for, rather than assessing the potential for adverse effects from both projects together.
- Natural England would welcome written justification with regards this methodology to support a robust justification of no adverse effects on integrity (AEoI) or harm.

Protected Species

Following consideration of Chapter 11 Biodiversity, Appendix 11E Riparian Mammal Survey Report and Appendix 11D Confidential Badger Report, Natural England is pleased to provide the following comments:

Water vole

- Update surveys should be undertaken prior to the start of construction as described in 11.6.16. of Volume I: Chapter 11 Biodiversity and Nature Conservation.
- At this stage it is difficult to comment on the suitability of proposals without access to The Water Vole Impact Avoidance Strategy.
- Prior thought should be given to the receptor area(s) as a result of the 2024 surveys, which show Drain 1 to be at carrying capacity. Compensation or enhancement of areas may be required prior to the displacement of water voles if suitable adjacent habitat is unavailable.
- The mitigation strategy should ensure the wider water vole population is not fragmented by the development.

Otter

- Update surveys should be undertaken prior to the start of construction as described in 11E.6.10. of Volume II: Appendix 11E Riparian Mammal Survey Report. If otters are found to be within the development footprint or surrounding areas, an appropriate avoidance-mitigation strategy should be drawn up.

Badger

- Update surveys should be undertaken prior to the start of construction as described in section 11D.6.8., making note of any newly created setts and any changes to the use or classification of existing setts.
- While there is no exact cut off for disturbance works, generally works outside of 30m from setts are considered low risk. However, this is dependent on the type of construction and the level of disturbance it may pose to the sett. For example, high impact drilling or boring works may cause ground vibration, significant at distances greater than 30m away, while low impact above ground construction may not pose any significant disturbance risk at less than 30m from the sett. It is therefore, the at the discretion of the customer/contractor to assess the risk posed to any badger setts by the specific works proposed, and whether a disturbance licence would be required.
- Natural England would like to see an indication of the distances of construction works from any Main Setts, with detail on the type of construction proposed and its impacts to badgers before we can comment on the whether disturbance licence would be required.

Date: 29 July 2025
Our ref: DAS/476976
Your ref: Keadby Next Generation Power Station

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Dear [redacted]

Discretionary Advice Service (Charged Advice)
Contract Reference 476976 – Customer Number 6155644, IET Ref UDS-A014275, PO Number 299029-00
Development proposal and location: Keadby Next Generation Power Station

Thank you for your consultation on the above dated 01 June 2025, which were received on 8th May and 16th June 2025.

This advice is being provided as part of Natural England's Discretionary Advice Service. Arup on behalf of Keadby Next Generation Limited has asked Natural England to provide advice upon:

- Draft Habitats Regulations Assessment (HRA) Report (Application Document Ref. 5.2) (dated January 2025, received 08 May 2025)
- KNGPS 5.2 - Habitats Regulations Assessment Appropriate Assessment Report - Draft June 2025 (received 16 June 2025), Planning Inspectorate Ref: EN0110001, June 2025

This advice is provided in accordance with the Quotation and Agreement dated 23rd June 2025.

Overarching advice-HRA Process
We advise that a number of impact pathways appear to have been screened-out from the appropriate assessment stage which would rely on mitigation in order to avoid/reduce impacts. If an impact pathway includes mitigation to reduce/remove impacts it should be included at the appropriate assessment stage.

It is necessary to include all potential impact pathways at the appropriate assessment stage (including those which were also assessed in the previously consented Keadby 3 scheme and are applicable to this project) alongside mitigation which is proposed to address the impact.

We further advise that the appropriate assessment does not currently clearly state the mitigation measures which will be secured to address identified impact pathways (for example water quality, noise) and clarification is sought regarding the certainty of measures which will be secured to address these impact pathways. This is provided in more detail below.

Assessment Conclusions
Humber Estuary Special Area of Conservation (SAC), Special Protection area (SPA) and Ramsar Thorne and Hatfield Moors Special Area of Conservation (SAC) and Special Protection Area (SPA)

Natural England is currently **not satisfied**, on the basis of the information which has so far been provided, that the proposal will not result in adverse effects on the integrity of the Humber

Estuary SAC/SPA/Ramsar or Thorne and Hatfield Moors SAC/SPA, either individually or in combination with other plans or projects.

Natural England therefore requests that additional information is provided in order to address these current uncertainties.

Impacts on Birds

Noise and Visual disturbance to birds on adjacent arable habitat
Natural England do not concur with the statement in paragraph 7.2.2, as arable fields have been shown to provide supporting habitat to wintering and passage birds associated with Humber Estuary SPA. We note that survey data from previous developments has been used to inform bird use of adjacent fields. The survey results demonstrate low levels of use in the adjacent fields, however as this data was collected in a few years ago, it should be paired with any available desk study information to further support the conclusions.

In addition, we advise that further detail of noise levels within the adjacent fields is provided through noise modelling and a noise contour map. We further advise that clarification is needed on the difference between background noise levels and the peaks during piling. The draft HRA AA cites habituation of birds to background noise, but does not clearly demonstrate timings and level of periodic noise potential impacts that current background noise may have on bird behaviour.

Impacts on bird foraging resources
We advise that clarification is required regarding 6.2.21. It is not clear from the information provided whether the justification for screening out this impact pathway is due to the location of the canal in excess of 10km from the SPA, and how potential direct impact pathways are considered in relation to the Humber Estuary Ramsar.

Water Quality & Aquatic Environment

Water Quality
Paragraph 6.3.24 and 6.3.28 of the HRA states that impacts from the volume, temperature and pollutant content of cooling water discharges will be controlled through the environmental permitting process. Natural England advise that the HRA should include additional information on impacts and mitigation in order to justify conclusions presented, this will also prevent delays further down the line which may impede the project. Information on the potential pollutant input should be provided in the HRA to understand the realistic scenario and how it can be overcome with appropriate controls.

We also advise that regardless of whether the mitigation is considered embedded in the project, details should be provided on what is to be implemented and how this is to be secured (i.e. in a CEMP/OEMP) in order to conclude no AEOI.

Discharge Pollutants
6.3.28 states that Best Available Techniques (BAT) will be implemented to prevent impacts independent of the site status as a designated site. The HRA should state what these measures are or indicate where they will be outlined (in the CEMP/OEMP for example), and how they will be secured. This should include evidence of how the effluent will be treated and monitored to understand how it will not contain pollutants that will impact on designated sites.

Some pollutants have cumulative effects, so the impact of pollutants from this development should be assessed in addition to the Keadby 1 and 2 baseline.

Discharge Volume and Temperature
Paragraph 6.3.26 and 6.3.27 state that because there is a larger volume of discharge already approved (Keadby 1 and 2) and that the water temperatures will be less than the temperature of the existing discharge already permitted, then impacts from this development are not significant. However, evidence should still be provided on what the anticipated temperature and volume inputs are for this development and how impacts to the designated sites were screened out

Previously, Keadby 1 was set to be decommissioned, it would be useful to clarify if this is still the case and how that impacts this development. If Keadby 1 is still due to be discharged, long-term temperature and volume inputs from Keadby Next Generation, following decommission of Keadby 1, should be assessed, and the effects on potential impacts upon designated site features. For example, Keadby 3/CCP provided a study to evidence that impacts would not occur.

Impacts from surface water
Whether the surface water drainage network will output water into designated sites should be discussed in the HRA, and if so, what mitigation measures are required to avoid impacts from pollutants in surface waters.

Accidents on the site may also carry a risk of pollution. Chemical spillages or fire on the Proposed Development Site may necessitate the use of fire-fighting chemicals or cause large volumes of water to become contaminated. The process for mitigating impacts that may arise in the event of an accident should be assessed.

Decommissioning
6.4.2 states that no removal of below ground structures is proposed. Degradation of the below ground structures could cause impacts to groundwater if pollutants are released. Risks to the designated sites associated with ground water pollution from ongoing degradation should be outlined in the HRA, along with how the risk will be monitored and mitigated.

Formatting
Regarding HRA formatting, currently there are two sections with the title Water Pollution. It would be useful for the HRA to specify within each section which aspect of water pollution that section is covering (e.g. construction or operation phase)

Air Quality

Threats/pressures
Natural England considers that the inclusion of atmospheric pollution as a threat/ pressure to Humber Estuary SAC/SPA and Thorne and Hatfield Moors SACs/SPA is appropriate.

Construction pollutants
Emissions from non-road mobile machinery such as generators during the construction period should also be considered. Ammonia arising from construction traffic on site and on the ARN should be considered as a pollutant in its own right (having regard for critical levels at the protected sites) and as a component of N deposition. Ammonia from NRMM should also be assessed if appropriate -e.g. if SCR is used, or if ammonia is used as a source of hydrogen for generators for example – or if this will not be emitted, this should be justified. As well as N deposition, the impact of acid deposition on qualifying features should be considered. As SO_2 is considered a potential pollutant from construction activities – albeit not at concentrations sufficient to result in LSE (6.2.39), this should be considered as well as the acidifying impacts of nitrogen.

Construction Dust
Justification provided for excluding construction dust impacts from the main site at 6.2.31-34 is

considered appropriate, and no LSE would occur as there is no qualifying feature that would be affected by dust within 200m

Construction Sulphur Dioxide
The potential for SO2 emissions is excluded as the construction activities proposed are not "generally considered likely" to produce high concentrations of SO2. Justification for this should be provided (fuel type to be used for example) – although NE would agree that SO2 concentrations in the area are low and therefore risk of exceeding SO2 critical levels is low – although if 1% of the critical level is exceeded there would be LSE (so consideration in the appropriate assessment would be needed, which would be able to account for predicted environmental concentrations, and whether the critical level could be exceeded).
Acid deposition however may be relevant, as indicated above.

Critical loads in construction traffic assessment
Regarding 6.2.44, the lower critical load of 20kgN/ha/yr for saltmarsh applies only to pioneer saltmarsh. Justification should be provided as to why the habitat within 200m of the ARN should not be considered as the more sensitive mid-upper saltmarsh (10-20kgN/ha/yr) – it is assumed the relevant feature referred to is the Salicornia H1310 type, which does have the higher critical load, but it is unclear that this is applicable to all the relevant parts of the site within 200m of the ARN (as well as 200m from the main site, as provided in the dust assessment)

Results of screening assessment for construction
In regards to 6.2.45, the process contributions of pollutants (NOx, SO2 and Ndep) at the locations in the Humber SAC/ SPA/ Ramsar should be provided within the HRA (as an annex if necessary), rather than elsewhere in the DCO application.
Reference to the air quality annex in the ES is noted, but this does indicate over 1% changes in Ndep from the project alone at several receptors, and NOx over 1% at one receptor (table 18) so justification as to why this LSE would not result in AEOI should be provided within the HRA.
Also, as indicated above, ammonia should be considered as a traffic pollutant, and as a component of Ndep.
NE therefore does not at present agree that LSE from construction activities at the Humber SAC/ SPA/ Ramsar can be excluded.

Operational pollutants
Consideration of NOx and ammonia for both gas and hydrogen firing are noted. Exclusion of SO2 as a pollutant is noted as (at 6.3.11) the fuels contain minimal levels of sulphur (and particulates) – this is considered a reasonable exclusion. Consideration of nitrogen and acid deposition is also noted (6.3.12),
Traffic impacts during operation are not addressed – as at 6.3.20 these will be minimal, and much less than construction vehicle numbers. Assuming additional information requested for the construction traffic can confirm there would be no LSE at qualifying features, this justification would be considered acceptable for operational traffic as well – though at present there is insufficient information to confirm this for the ARN.

Operational activities – screening thresholds
Regarding 6.3.14-15, as PCs of NOx exceed 1% of the critical level, there is an LSE from this pollutant, so consideration within the appropriate assessment is required (which can address background concentrations in relation to critical levels).
Ammonia and acid deposition are stated to not exceed 1% of their critical level and load respectively alone or in combination (6.3.16). Table 14 of the AQ ES chapter indicates that ammonia would be 2% of the critical level at Humber SAC/SPA/Ramsar so it is not clear why LSE is excluded.
Clarification of the in-combination approach (for acid deposition, where the project alone generates 0.5% of the CLoad) should be provided (i.e. which in-combination projects were considered).
N deposition PC exceeds 1% of the critical load (3.2% - 6.3.17) so LSE cannot be excluded. The ecological points made are acknowledged, but these should be made and justified in the appropriate assessment. (The affected area would likely extend further from the main site than dust impacts – so it is not clear that all the affected area would not contain more sensitive qualifying features/ more sensitive saltmarsh habitat. Mapping would help to confirm this)

Para 6.3.17 indicates the more sensitive saltmarsh (critical load of 10kgN/ha/yr) is present at receptor OE32 – but Table 15 of appendix 8B indicates this receptor is considered to be Rich Fen, with a critical load of 15kgN/ha/yr – with a PC of 0.11kgN/ha/yr from the project – so >1% using the saltmarsh critical load. The difference between the values provided at 6.3.17 in the HRA should be explained.

NE does not agree LSE for NOx, ammonia and Ndep can be excluded, and considers there is insufficient information to exclude LSE from acid deposition at the Humber SAC/SPA/Ramsar

Again, it would be helpful for the relevant figures to be provided in this HRA to avoid searching elsewhere in the DCO application.

Construction and operational impacts at Thorne and Hatfield Moors protected sites

It is unclear why these SACs/ SPAs and Ramsar are excluded from the assessment. Table 14 and 15 of Appendix 8B of the ES indicate a PC of <1% for NOx, NH3 and N dep at these sites. Reading further into the HRA (section 8) it does state that the results presented in the ES are in-combination, and not from the project alone – and relevant in-combination projects are listed in an annex to the HRA. This should be made clearer earlier in the HRA, as in combination impacts are required to be taken into account at screening/ LSE stage. Results are generally presented for the project alone, and then the project in combination – so this approach is unusual, albeit the in-combination assessment appears to include appropriate projects.

It is accepted there would be no LSE from NOx, NH3, Ndep or acid dep at Thorne and Hatfield Moors sites – but clarification (and modelling results) explaining that the modelling was undertaken in-combination from the outset should be provided in the HRA.

In-Combination Effects

Throughout the draft HRA and AA it should be made clearer which developments, and which combinations of effects, are being considered when the wording "in-combination" is being used. This should include clarifying whether Keadby 1 is included. Also, it should confirm whether Keadby 1 is being decommissioned, if so when and how this is being considered when looking at in-combination effects.

There are points in the HRA (e.g. paragraph 6.3.26) where it is implied that the project is being assessed in-combination with the other Keadby developments, but they are actually included in the baseline. Clarification is needed as to which developments are being considered within the baseline.

The in-combination assessment should be carried out prior to the Appropriate Assessment as the results inform which impacts should be considered at the Appropriate Assessment stage.

For clarification of any points in this letter, please contact [redacted] at [redacted]@naturalengland.org.uk and copy to consultations@naturalengland.org.uk

The advice provided in this letter has been through Natural England's Quality Assurance process

The advice provided within the Discretionary Advice Service is the professional advice of the Natural England adviser named below. It is the best advice that can be given based on the information provided so far. Its quality and detail is dependent upon the quality and depth of the information which has been provided. It does not constitute a statutory response or decision, which will be made by Natural England acting corporately in its role as statutory consultee to the competent authority after an application has been submitted. The advice given is therefore not binding in any way and is provided without prejudice to the consideration of any statutory consultation response or decision which may be made by Natural England in due course. The final judgement on any proposals by Natural England is reserved until an application is made and will be made on the information then available, including any modifications to the proposal made after receipt of discretionary advice. All

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Yours

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Annex 1
European Protected Species

A licence is required in order to carry out any works that involve certain activities such as capturing the animals, disturbance, or damaging or destroying their resting or breeding places. Note that damage or destruction of a breeding site or resting place is an absolute offence and unless the offences can be avoided (e.g. by timing the works appropriately), it should be licensed. In the first instance it is for the developer to decide whether a species licence will be needed. The developer may need to engage specialist advice in making this decision. A licence may be needed to carry out mitigation work as well as for impacts directly connected with a development. Further information can be found in Natural England's 'How to get a licence' publication.

If the application requires planning permission, it is for the local planning authority to consider whether the permission would offend against Article 12(1) of the Habitats Directive, and if so, whether the application would be likely to receive a licence. This should be based on the advice Natural England provides at formal consultation on the likely impacts on favourable conservation status and Natural England's guidance on how the three tests (no alternative solutions, imperative reasons of overriding public interest and maintenance of favourable conservation status) are applied when considering licence applications.

Natural England's pre-submission Screening Service can screen application drafts prior to formal submission, whether or not the relevant planning permission is already in place. Screening will help applicants by making an assessment of whether the draft application is likely to meet licensing requirements, and, if necessary, provide specific guidance on how to address any shortfalls. The advice should help developers and ecological consultants to better manage the risks or costs they may face in having to wait until the formal submission stage after planning permission is secured, or in responding to requests for further information following an initial formal application.

The service will be available for new applications, resubmissions or modifications – depending on customer requirements. More information can be found on Natural England's website